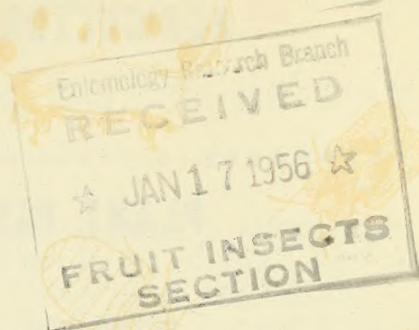


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Cooperative ECONOMIC INSECT REPORT

Issued by

PLANT PEST CONTROL BRANCH

AGRICULTURAL RESEARCH SERVICE

UNITED STATES DEPARTMENT OF AGRICULTURE

AGRICULTURAL RESEARCH SERVICE

PLANT PEST CONTROL BRANCH

ECONOMIC INSECT SURVEY SECTION

The Cooperative Economic Insect Report is issued weekly as a service to American Agriculture. Its contents are compiled from information supplied by cooperating State, Federal, and industrial entomologists and other agricultural workers. In releasing this material the Branch serves as a clearing house and does not assume responsibility for accuracy of the material.

Reports and inquiries pertaining to this release should be mailed to:

Economic Insect Survey Section
Plant Pest Control Branch
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United States Department of Agriculture
Washington 25, D. C.

COOPERATIVE ECONOMIC INSECT REPORT

Recent personnel changes within Agricultural Research Service, U. S. Department of Agriculture, will be of interest to all of you. Dr. Avery S. Hoyt, director of the Crops Regulatory Programs, the office responsible for directing activities of the Plant Pest Control Branch and the Plant Quarantine Branch, retired December 31, 1955. Dr. W. L. Popham, chief of Plant Pest Control Branch was appointed, effective January 1, 1956, to succeed Dr. Hoyt. Mr. Emory D. Burgess, who has been assistant chief of Plant Pest Control Branch, succeeds Dr. Popham as Branch Chief.

BROWN WHEAT MITE active on wheat in Stillwater area of Oklahoma. (p. 15).

SPOTTED ALFALFA APHID heavy in some counties of Utah, Oklahoma and Texas. Activity continues in areas of California, Nevada and Arkansas. (p. 15).

APHIDS appearing in lettuce in lower Rio Grande Valley of Texas. (p. 18).

A BOSTRICHID (*Sinoxylon ceratoniae*) collected in Los Angeles County, California. First United States record. (p. 20).

Distribution of SWEET CLOVER WEEVIL in the United States. (p. 17).

SUMMARY OF INSECT CONDITIONS - 1955 - in Texas (p. 22), Nebraska (p. 26).

Highlights of INSECT OCCURRENCES in Canada - 1955. (p. 31).

Reports in this issue are for the week ending January 6, 1956, unless otherwise designated.

WEATHER FOR THE WEEK ENDING JANUARY 6, 1956

Varied precipitation conditions over the country were predominant features of the week's weather. Beginning Sunday, the strong counterclockwise winds north of a large stationary low pressure system, centered between the United States Coast and Bermuda, drove warm, moist air over existing cold air in the northeastern states and caused large areas of freezing rain and sleet which resulted in hazardous driving conditions. This situation, followed by rain as warming continued, began in the New England States and by Monday extended as far south as Virginia. Snow fell in eastern Ohio, West Virginia, and western portions of New York, Pennsylvania and New England. Outstanding, too, was the vast area where little or no precipitation was received in the extreme North from central Montana to eastern Minnesota gradually widening in the central portion of the country to include eastern Nevada through most of Virginia, and in the extreme South from the west coast of California to western Louisiana. The lack of moisture over most of this area is becoming serious. Fortunately, winds over the midwestern plains were not sufficiently high to cause any serious erosion damage.

Moderate to heavy precipitation continued in Washington, western Oregon, and northern and central coastal areas of California until late in the period, thereafter occurrences were only light to moderate. From time to time, moderate falls extended eastward into parts of Idaho and adjacent areas. Cape Hatteras received heavy precipitation on Thursday, while moderate amounts occurred southward along the coast into central Florida. Moderate to light falls elsewhere during the period were in the northeastern United States, the Great Lakes region and along the gulf coast. Temperatures again averaged above normal over the greater portion of the United States. The largest of these average departures, a $+15^{\circ}$, occurred in three states - Wyoming, Idaho, and Nevada - as southwesterly and chinook winds continued in these areas. Maximum temperatures of record breaking proportion were recorded at Salt Lake City airport on January 4, 5, 7, and 8. Day to day temperatures varied in the north and central plain areas with the interchange of air from cold Arctic high centers and Pacific low pressure frontal systems. Along the east coast from Maine southward and as far west as western New York and Pennsylvania, central Kentucky and Tennessee, and eastern Mississippi temperatures averaged below normal, with the lowest average departure a -9° in Southern Florida. Freezing temperatures in Florida caused damage on two dates, January 6 and 9. The snow cover decreased somewhat in most areas with the continued warming, but slight increases did occur in the New England States, New York, and Pennsylvania. (Summary Supplied by U. S. Weather Bureau).

Correction: CEIR 6(1):2. Should read "Weather for week ending January 2, 1956".

CEREAL AND FORAGE INSECTS

BROWN WHEAT MITE (Petrobia latens) - OKLAHOMA - Reported from Lincoln, Creek, Pawnee and Payne Counties. Believed to be an eastern extension of the infestation. Averages of 70 per linear foot of row in Lincoln County, 50 in Creek, 10 in Pawnee and 25 in Payne County. (Coppock).

ENGLISH GRAIN APHID (Macrosiphum granarium) - OKLAHOMA - About 40 per linear foot of row in two wheat fields in Pawnee County. Restricted largely to base of plants. (Coppock).

EUROPEAN CORN BORER (Pyrausta nubilalis) - NOTE: Status of the European Corn Borer in 1955, CEIR 5(52):1133. If the figure in last line on the page is not clear, it should read 1,644.

LEAFHOPPERS - OKLAHOMA - Most small grain fields in central counties had 3-10 per square yard. (Coppock).

SPOTTED ALFALFA APHID - CALIFORNIA - Light to medium infestation in parts of Riverside County and some medium infestations in Madera County. Infestation general in Kings County where 1281 acres were treated. Infestations in Orange County were light and slightly higher in Solano County than during November. Infestations light in Santa Barbara County but widespread in areas of Santa Ynez, Lompoc, Santa Maria and Cuyama Valley. (Cal. Coop. Rept., December).

UTAH - Occurring in alfalfa fields in Washington County, often in very large numbers. Causing concern to alfalfa growers. (Hughes, Knowlton). OKLAHOMA - Causing economic damage in Tillman County, with highest infestation on old alfalfa crop. (Stiles). A check of 12 fields in Pottawatomie and Lincoln Counties showed continuing high populations with moderate damage and two fields with severe damage. Damage increased due to lack of moisture. (Coppock). NEVADA - Populations reduced to non-economic numbers but still active in southern area, week of Dec. 10. (Gallaway). TEXAS - Local heavy infestation in Wharton County. (Burleson). Severe infestation on irrigated alfalfa in Travis County. (Smarr). First record for both counties. (Gaines). ARKANSAS - Activity continues in central counties. All stages including young nymphs and winged forms. Majority near ground and ranging up to 40 per leaflet. Some evidence of parasitism but insufficient to check infestation. (Warren, Jan. 2).

MEADOW SPITTLEBUG (Philaneus leucophthalmus) - NEW JERSEY - Fall survey shows that number of egg masses is much lower than in 1953-54. Average number of masses found in each field is less than one-fourth the number found in 1953 and less than one-half the number found in 1954. Spittlebug potential for 1956 is expected to be lower than in 1955. The northwestern area is perennially most heavily infested and will require control in 1956. The southwestern areas show less activity, but scattered fields in this area show heavy infestations. (Insect-Disease News Letter, 12/28/55).

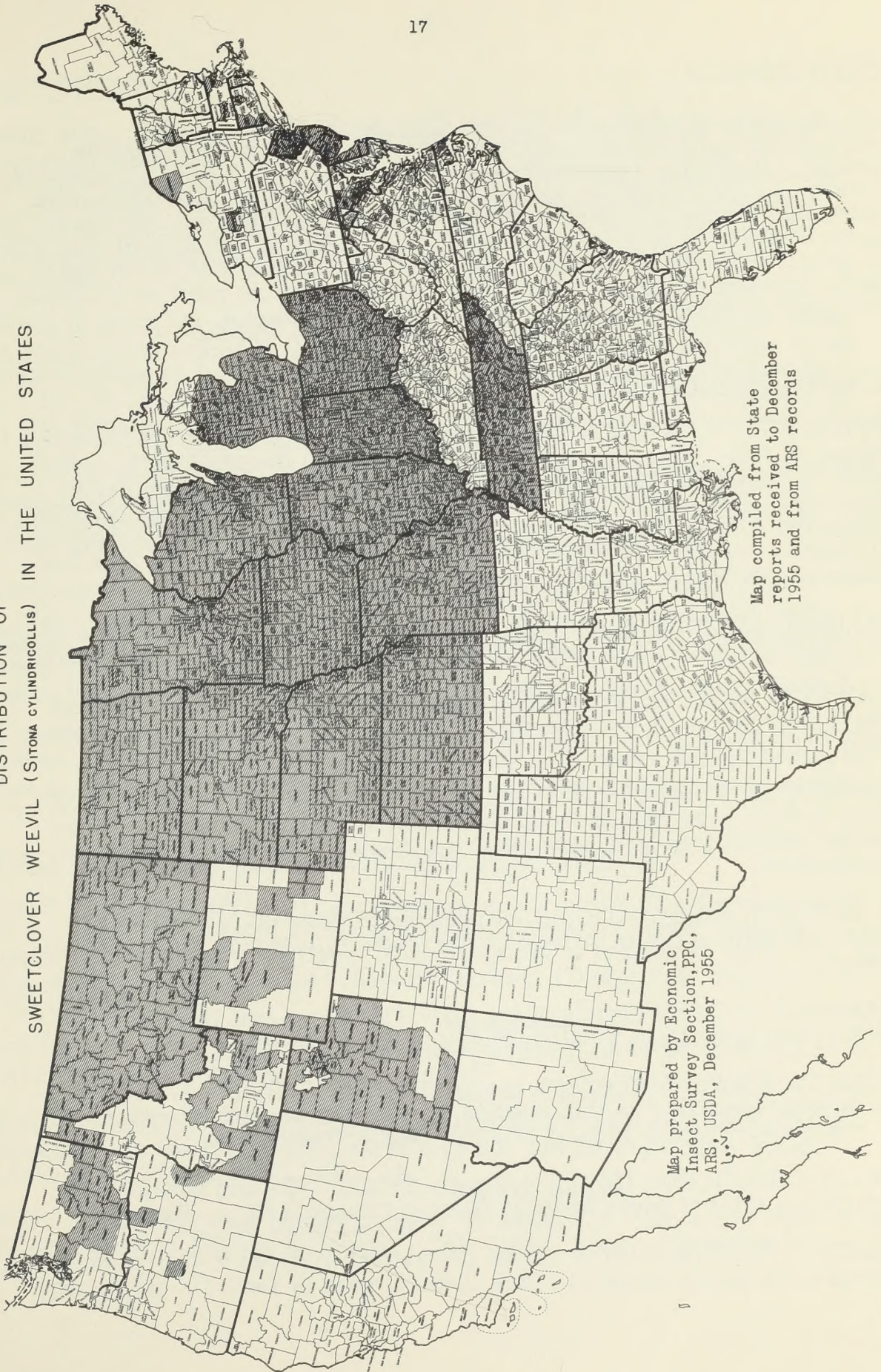
CLOVER ROOT CURCULIO (Sitona hispidula) - VIRGINIA - Moderate infestation in a southeastern county alfalfa field. (Amos).

AN OLETHREUTID MOTH (Bactra verutana chrysea) - CALIFORNIA - Severely damaging canes and crowns of ornamental papyrus grass in Los Angeles County in November. Numerous records with increased popularity of the grass as ornamental. (Cal. Coop. Rept., Dec. 19).

Distribution of Sweetclover Weevil

The map on the opposite page shows the known distribution of sweetclover weevil (Sitona cylindricollis) in the United States according to State reports and Agricultural Research Service records. In obtaining the data, an inquiry was sent to each State Clearing House. Replies have been received from 46 States. The distribution is based on actual records in so far as possible.

DISTRIBUTION OF
SWEETCLOVER WEEVIL (*SITONA CYLINDRICOLLIS*) IN THE UNITED STATES



Map prepared by Economic
Insect Survey Section, PPC,
ARS, USDA, December 1955

Map compiled from State
reports received to December
1955 and from ARS records

FRUIT INSECTS

Citrus Insect Situation, California, December

Some medium infestations of BLACK SCALE in citrus in Riverside County. Moderate infestations of COTTONY-CUSHION SCALE in Imperial County. Light to medium infestations of CALIFORNIA RED SCALE in Riverside County citrus and light to medium infestations in lemons in Santa Barbara County. Local, heavy infestations of CITRUS BUD MITE in lemon orchards in Orange County and light infestations in lemons in Santa Barbara County. CITRUS RED MITE - Light to medium in lemon orchards in Santa Barbara County. (Cal. Coop. Rept.).

TRUCK CROP INSECTS

SWEETPOTATO WEEVIL (Cylas formicarius elegantulus) - ALABAMA - Found on four properties in vicinity of Malvern, Geneva County, during week of December 19. GEORGIA - Infesting three properties near Montrose, Laurens County, during week of December 12. MISSISSIPPI - Collected in an experimental planting of sweetpotatoes at State College, Oktibbeha County, in early December. These are new county records. (Sweetpotato Weevil Control Program Rept. , Jan. 5).

LOOPERS (probably Autographa sp.) - CALIFORNIA - Heavy infestations in lettuce fields in Palo Verde Valley. (Cal. Coop. Rept. , December).

CABBAGE APHID (Brevicoryne brassicae) - CALIFORNIA - Medium heavy infestations on cole crops in Santa Barbara County. (Cal. Coop. Rept. , December).

ARTICHOKE PLUME MOTH (Platyptilia carduidactyla) - CALIFORNIA - Crop reduction ranged up to 20 percent in Monterey County artichoke fields. Infestations light in Santa Cruz County. (Cal. Coop. Rept. , December).

A LETTUCE APHID - TEXAS - Appearing in over 60 percent of untreated lettuce fields throughout the lower Rio Grande Valley. (Wene, Deer).

CABBAGE LOOPER (Trichoplusia ni) - TEXAS - Light infestation on lettuce and cabbage in Hidalgo County. (Wene, Deer).

TOMATO PINWORM (Keiferia lycopersicella) - TEXAS - An insect tentatively identified as this species infesting 60 percent of ripe fruit of one tomato field in Hidalgo County. (Wene, Deer).

FALSE CHINCH BUG (Nysius ericae) - TEXAS - Caused considerable injury to a field of young beets in Hidalgo County. (Wene, Deer).

THRIPS - NEVADA - Onion thrips populations reduced to non-economic numbers on green onions in Clark County, week of Dec. 10. (Gallaway).

COTTON INSECTS

PINK BOLLWORM (Pectinophora gossypiella) - ARIZONA - During a survey in November at Stafford, Graham County, nine live larvae and four previously-infested bolls were found in 1000 bolls examined in two fields. At San Simon, Cochise County, two live larvae were taken in 500 bolls. (Ariz. Coop. Rept.). CALIFORNIA - No specimens found in several thousand bushels of trash inspected. (Cal. Coop. Rept., December).

BOLL WEEVIL (Anthonomus grandis) - MISSISSIPPI - Additional notes on hibernation report in CEIR 6(1):3. Ground trash examinations in fall of 1955 revealed the following average number of weevils per acre by county: Bolivar, 2,033; Issaquena, 6,413; Leflore, 726; Oktibbeha, 2,420; Rankin, 3,388; Sharkey, 1,089; Washington, 10,503. (Merkl et al).

COTTON LEAF PERFORATOR (Bucculatrix thurberiella) - CALIFORNIA - Considerable leaf damage in cotton fields in Imperial and Riverside Counties in 1955. Populations still higher than expected in much of cotton areas of this region. (Cal. Coop. Rept., December).

THURBERIA WEEVIL (Anthonomus grandis thurberia) - ARIZONA - Survey of bolls on plants along Santa Cruz River in Santa Cruz County showed 370 live adults, larvae or pupae in 2500 bolls; 364 showed cells where larvae had been; and 418 bolls were infested at the time or had been infested--in all about 17 percent infestation. (Ariz. Coop. Rept.).

A LEAF ROLLER (Platynota stultana) - ARIZONA - Still active in green cotton at Eloy, Pinal County, indicating possible heavy overwintering in this and other crops unless cold weather appears. (Ariz. Coop. Rept.).

FOREST, ORNAMENTAL AND SHADE TREE INSECTS

TURPENTINE BEETLES (Dendroctonus spp.) - TEXAS - Causing death of pines in Sam Houston National Forest on areas of recent logging operations and hardwood flats. Other reports of activity in Polk, Nacogdoches, Cherokee and Jasper Counties. (Texas For. Pest Committee).

IPS BEETLES - ARKANSAS - Increased activity reported in Huttig area. (Ark. State For. Comm. Rept., Jan. 1).

PALES WEEVIL (Hylobius pales) - ARKANSAS - Still some activity in November in the Bismarck area (Clark and Hot Spring County area). (Ark. State For. Comm., Jan. 1).

SOFT SCALE (Coccus hesperidum) - CALIFORNIA - Moderate infestation on camellias in Humboldt County. (Cal. Coop. Rept., December).

ROOT WEEVILS (Brachyrhinus spp.) - CALIFORNIA - Moderate infestations in begonia fields in Santa Cruz County. (Cal. Coop. Rept., December).

INSECTS AFFECTING MAN AND ANIMALS

BLACK WIDOW SPIDER (Latrodectus mactans) - NEVADA - Numerous requests for control of this pest and the clover mite in homes in western area. (Gallaway).

COCKROACHES - VIRGINIA - Blatella germanica very heavy in apartment building in Blacksburg. (Morris). NEVADA - Single specimen of Panchlora cubensis taken at Sparks, Dec. 17. (Lauderdale). CALIFORNIA - Supella supellectilium found for first time in Modoc County. (Cal. Coop. Rept., December).

CATTLE LICE - VIRGINIA - Medium to heavy on beef cattle on a farm in Montgomery County. (Copenhaver). Solenoptes capillatus populations building up on unsprayed dairy animals at one locality in Montgomery County and warranting control measures. (Raffensperger, Turner).

CATTLE GRUBS (Hypoderma spp.) - UTAH - Now abundant in backs of cattle. Some beef herds have been treated for control. (Hughes, Knowlton). KANSAS - Of 59 steers examined near Manhattan, no grubs were found in 27; 24 had 1-10; six had 11-20; and two had 21-30. Average infestation was three grubs per animal. (Matthew). VIRGINIA - H. lineatum beginning to appear in backs of dairy cattle on a farm in Montgomery County, with up to 12 per animal. (Turner, Raffensperger).

BROWN DOG TICK (Rhipicephalus sanguineus) - DELAWARE - Annoying in a home in Newark in late December and early January. (Stearns).

BENEFICIAL INSECTS

LADY BEETLES - OKLAHOMA - Hippodamia convergens active in some alfalfa fields infested with spotted alfalfa aphid in Pottawatomie and Lincoln Counties. (Coppock). CALIFORNIA - Abundant in alfalfa fields in Palo Verde Valley of Riverside County in complex with syrphid flies and lacewings. (Cal. Coop. Rept., December).

MISCELLANEOUS INSECTS

A BOSTRICHID (Sinoxylon ceratoniae) - CALIFORNIA - Medium infestation found in wood at Culver City, Los Angeles County, June 25, 1955. (Det. E. J. Gerberg). First collection in U.S. Previously-known range: Egypt and French Sudan on poinciana and acacia trees. (Cal. Coop. Rept., Dec. 16, 1955).

CLOVER MITE (Bryobia praetiosa) - DELAWARE - Annoying in home at Newark, December 27. (Stearns).

Light Trap Collections

TEXAS (College Station, Dec. 16, 1955-Jan. 4, 1956): Pseudaletia unipuncta, 554; Laphygma frugiperda, 1; Feltia subterranea, 96; Agrotis ypsilon, 36. (Weslaco, Dec. 1-31): P. unipuncta, 930; L. frugiperda, 49; A. ypsilon, 102; Heliothis zea, 19; F. subterranea, 90; Heliothis virescens, 1. (Winter Garden, Dec. 1-31): P. unipuncta, 233; L. frugiperda, 7; F. subterranea, 18; A. ypsilon, 2. (Beaumont, December 1-22): P. unipuncta, 231; L. frugiperda, 11; A. ypsilon, 18. ALABAMA - (Auburn, Dec. 31, 1955-Jan. 5, 1956): P. unipuncta, 2.

STORED PRODUCTS INSECTS

STORED GRAIN INSECTS - ARKANSAS - Twelve bins of 98 rice and oat bins examined in the Stuttgart-Dewitt area in December were infested with one or more species of insects. Infestations were as follows: saw-toothed grain beetle, 6 bins; Indian-meal moth, 4; lesser grain borer, 5; flat grain beetle, 3; rice weevil, 1; fungus beetles and dermestids, 1 each. (Rouse). VIRGINIA - Tribolium confusum in complex with Trogoderma versicolor and T. sternale, are present in storage room and entering processing room of a dried milk plant. (Rowell, Morris).

POTATO TUBERWORM (Gnorimoschema operculella) - VIRGINIA - Damaging potatoes stored in Stafford County. (Tulloss).

RECENT INTERCEPTIONS AT PORTS OF ENTRY

Of recent interest was the interceptions of a living larva of a pyraustid, Evergestis forficalis (L) in cabbage from England in ships' stores at Galveston, Texas (Vitrano). This insect has been reported injurious to crucifers and other vegetables in parts of Europe and Asia. The larvae are leaf rollers which feed on the underside of the leaves and which cause considerable damage at times to cabbage. Carrots, celery and beets are also occasionally injured. In Japan, severe injury to radishes and turnips has been reported. Observations of the life history of the insect in Russia indicate it overwinters as a mature larva in a pupal cell in the soil. Pupation occurs in the spring. The pupal stage lasts about 2 weeks. The adults appear in early summer, deposit eggs usually in groups on the leaves or stems. On hatching, the larvae roll the leaves and feed in the leaf tissue on the underside of the leaves. There is one generation a year in northern areas and a partial or complete second generation in the southern parts of the range of the insect. E. forficalis has been intercepted occasionally in recent years on kale, cauliflower, and beet leaves in ships' stores from various countries of Europe, including Belgium, Denmark, France, England, Holland, Ireland, Italy and Norway. It is not known to occur in the United States. (Compiled - Plant Quarantine Branch).

SUMMARY OF INSECT CONDITIONS - 1955

TEXAS

Reported by G. T. Davis

This report is for the period November 1, 1954 to November 1, 1955.

Cereal and Forage Insects

Infestations of WINTER GRAIN MITE (Penthaleus major) began to appear in November, 1954. Medium to heavy, rather general, populations developed in many fields of small grain within the area bordered by Childress, Paducah, Aspermont, Haskell, Graham, Stephenville, Temple, Marlin, Corsicana, Terrell, Greenville, Decatur, Wichita Falls and back to Childress. Infestations were heavier and more general than last year. Some localities in other parts of the State also were infested. Light infestations of BROWN WHEAT MITE (Petrobia latens) occurred in small grain fields of Denton, Cooke, Collin, Dallas and Tarrant Counties. Medium to heavy populations were found in many drought-affected fields of Swisher, Castro, Potter, Hutchinson, Hansford, Sherman, Ochiltree, Lipscomb, Hemphill, Childress, Hardeman and Foard Counties. GREENBUG (Toxoptera graminum) was found in small numbers in many fields over the small grain growing areas; however, heavy populations occurred only in Swisher, Randall, Donley, Briscoe, Deaf Smith, Castro and Parmer Counties. The greenbug was more numerous and widely distributed in the fall of 1955 than for several years.

CORN EARWORM (Heliothis zea) and FALL ARMYWORM (Laphygma frugiperda) caused heavy damage to corn, grain sorghums, peanuts and other forage crops throughout the growing season. The LESSER CORNSTALK BORER (Elasmopalpus lignosellus) caused widespread, heavy damage to peanuts in Mason, Llano, Erath, Comanche, Caldwell and San Saba Counties. Cowpeas were heavily damaged in Parker, Hardeman and Wilbarger Counties. This pest occurred over larger areas but populations and damage to individual fields in general were somewhat lower than last year. GRASSHOPPERS (many species) occurred over much of Texas from the last half of April through August. They were more widely distributed and caused more damage than for several years. Some 800,000 acres of rangeland in the panhandle were treated for grasshoppers with good results. SPOTTED ALFALFA APHID was first reported officially in Texas January 7, 1955, from the panhandle area on alfalfa. Shortly after this date, infestations were found in most alfalfa-growing areas and considerable damage was caused by this pest during the year. Damage occurred due to spotted, local infestations of cutworms, armyworms, cabbage looper, alfalfa looper, webworms, alfalfa caterpillar, false wireworms, sod webworms, white grubs, range termites, red-necked peanutworm, vetch bruchid, clover leaf weevil, blister beetles, rice water weevil, pea aphid, aphids, corn leaf aphid, chinch bugs, stink bugs, lygus bugs, three-cornered alfalfa hopper,

thrips, leafminers and seed corn maggot. A separate report has been made on SOUTHWESTERN CORN BORER (Diatraea grandiosella) and the SUGARCANE BORER (D. saccharalis). (See CEIR, 5(48):1063).

Fruit and Nut Insects

SAN JOSE SCALE (Aspidiotus perniciosus) infestations on peaches and plums decreased considerably from last year because of widespread dormant spray applications and parasites and predators which increased during the growing season since regular spray schedules were not used. The late freeze destroyed this year's fruit crop; therefore, damage from PLUM CURCULIO (Conotrachelus nenuphar) and CATFACING INSECTS was negligible. The PEACH TREE BORER (Sanninoidea exitiosa) and LESSER PEACH TREE BORER (Synanthedon pictipes) increased slightly and in general, heavily infested poorly-cared-for orchards in eastern areas. Light infestations of the PEACH TWIG BORER (Anarsia lineatella) continued in peach orchards in the Stephenville and Fredericksburg areas. Pecan yields were reduced greatly by the late freeze, but a smaller percentage of the crop was lost to PECAN NUT CASEBEARER (Acrobasis caryae) because of increased control measures. HICKORY SHUCKWORM (Laspeyresia caryana) infestations on pecans were heavier and more widespread than for several years. Light to medium, spotted local infestations of pecan phylloxera, pecan bud moth, black pecan aphid, twig girdlers, obscure scale and spider mites were reported. Citrus orchards in the Rio Grande Valley had mostly light to medium, scattered local infestations of the following insects; fire ants, citrus red mites, chaff scale, citrus rust mites, California red scale, orange-dog, Platynota rostrana and Amorbia sp. Citrus in the Winter Garden area had light to medium, scattered infestations of the following insects: leaf-footed bugs, stink bugs, roundheaded borers, and orange-dogs.

Truck Crop Insects

CORN EARWORMS caused heavy damage throughout the year to corn, tomatoes, lettuce and other vegetable crops. The CABBAGE LOOPER (Trichoplusia ni) caused considerable damage to lettuce, cabbage, cauliflower and turnips in vegetable-growing areas. Infestations of the SERPENTINE LEAF MINER (Liriomyza sp.) occurred in seedbeds of tomatoes, peppers and lettuce. Medium to heavy infestations appeared in fields of tomatoes, peppers, lettuce and cantaloupes, especially in the Rio Grande Valley. Curly top, transmitted by the BEET LEAFHOPPER (Circulifer tenellus), caused unusually heavy losses to the spinach crop in the Winter Garden area. Heavy losses of tomatoes and beets occurred in the Winter Garden, plains and panhandle areas. Heavy infestations of ONION THRIPS (Thrips tabaci) caused much damage in most untreated fields in the onion-growing areas. Several species of CUTWORMS caused damage to practically all vegetable and garden crops.

Cotton Insects

Insect damage to cotton in most areas was generally heavier than for several years. Improved moisture conditions favored a build-up of insects. Insect activity remained low in the coastal bend, southwest and lower valley areas because of the continued drought conditions during the growing season. CUTWORMS, FALSE WIREWORMS and GARDEN WEBWORM damaged stands and caused replanting in occasional fields in most areas. COTTON APHID (Aphis gossypii) infestations early in the season were medium to heavy in scattered fields in the lower valley, coastal bend, southwest, upper coastal, south central, east, central and north and south plains areas. Late-season infestations were reported in a few fields of the lower valley, south central, central, west, northwest and north and south plains areas. Damaging THRIPS (Frankliniella spp.) infestations occurred in occasional cotton fields in all areas, especially in the eastern one-third of the State. One of the heaviest and most prolonged thrips migrations from wild host plants to cotton in many years caused heavy damage to untreated cotton fields. This damage occurred in the south central, east, central, north central, northeast, west cross timbers and northwest areas.

COTTON FLEAHOPPER (Psallus seriatus) emergence from hibernation cages at College Station and Waco was the highest since 1949. Infestations were generally heavy in the northwest and west cross timbers areas with mostly light to occasional heavy populations in other areas. A MIRID (Creontiades debilis) caused some damage to a few fields in the lower valley and the upper coastal areas. LYGUS BUGS in injurious populations were reported from scattered fields in most areas. GRASSHOPPERS (Melanoplus differentialis and other spp.) damaged cotton more extensively throughout the eastern third of the State and in the northwest and north and south plains areas than during the past several years. Light to heavy, rather general, infestations of a LEAF MINER (Liriomyza sp.) occurred on young cotton, principally on the cotyledonous leaves, in the upper coastal, south central, east, central and north central areas. Some late-season infestations developed in north central Texas. The CABBAGE LOOPER (Trichoplusia ni) caused some damage to cotton in the lower valley, southwest, south central, central, east and northwest areas and heavy damage in the west central, west and north and south plains areas. BROWN COTTON LEAFWORM (Acontia dacia) infestations ranged from light to heavy on seedling cotton in many counties of the upper coastal, south central, east and central areas. Light to medium infestations continued in some fields throughout the season but caused little damage where regular control applications were used. Late in the season the brown cotton leafworm and the cabbage looper did a good job of defoliating cotton in the Brazos River bottoms of Brazos and Burleson Counties. Rather heavy populations appeared in other areas. BOLL WEEVIL (Anthonomus grandis) emergence from hibernation cages at Waco was higher than in any year except 1941. Showery weather conditions were ideal for boll weevil reproduction. One of the heaviest weevil infestations experienced developed in the upper coastal, south central, central, north central,

northeast and east areas. Medium to heavy weevil infestations also developed in the lower valley, west cross timbers and parts of the southwest, west central and northwest areas. BOLLWORM (Heliothis zea) infestations of economic importance occurred in occasional fields in all areas. Heavy and prolonged infestations occurred in the south central, east and central areas. One or two heavy broods of bollworms deposited eggs on cotton in northeast and north central areas. The first COTTON LEAFWORM (Alabama argillacea) was found in San Patricio County on June 9. Heavy infestations developed in occasional fields in several areas and required treatment. General heavy infestations developed in the very late season on cotton which reacted from early fall rains in the central areas. Light to medium early season infestations of SPIDER MITES occurred in scattered fields over most areas and required treatment in some cases. Late-season infestations were scarce and of little economic importance except in the lower valley where many fields received treatment or heavy damage resulted. PINK BOLLWORM (Pectinophora gossypiella) infestations were considerably higher than last year, especially in the counties along the Brazos River. Initial infestations this year were somewhat higher and more general than last year in most areas. Most of the damage occurred on late fruiting cotton. The COTTON STAINER (Dysdercus suturellus) occurred in light to heavy infestations in a few scattered fields of the lower valley and upper coastal areas. SALT-MARSH CATERPILLAR (Estigmene acrea) caused some damage to isolated cotton in the southwest, upper coastal and east areas. A LEAF ROLLER (Platynota nigrocervina) occurred in light, general infestations on cotton in Brazos and Burleson Counties. This pest has not been reported on cotton since 1919.

Stored Products Insects

Stored grain pests continued to increase in importance because of the large amounts of grain in storage and the unusually heavy infestations which generally occurred in most farm-stored grain this year. The stored grain insects in the order of importance are rice weevil, a rice moth (Corcyra cephalonica), lesser grain borer, Indian-meal moth and bran beetles (including flat grain beetle, confused flour beetle, saw-toothed grain beetle and a fungus beetle (Typhaea sterocorea)). VETCH BRUCHID (Bruchus brachialis) continued to increase in north and northeast Texas.

Forest, Ornamental and Shade Tree Insects

TURPENTINE BEETLES (Dendroctonus spp.), IPS BEETLES and ENGRAVER BEETLES in general were not as heavy as they were the previous years; however, some damage occurred in scattered localities of Angelina, Houston, Jasper, Newton, Trinity, San Augustine, Anderson, Montgomery, Nacogdoches, Cherokee and Tyler Counties. TEXAS LEAF-CUTTING ANT (Atta texana) caused considerable damage in some parts of Nacogdoches, Cherokee and Newton Counties by defoliating seedling and young pine trees. Medium to heavy populations of RED-HEADED PINE SAWFLY (Neodiprion lecontei) occurred in Newton, San Augustine and Rusk Counties. Other insects infesting pine trees in light to medium scattered populations were colaspis beetle, pales weevil,

deodar weevil and pine webworm. A complex of ORANGE-STRIPED OAKWORM (Anisota senatoria), VARIABLE OAK LEAF CATERPILLAR (Heterocampa manteo) and A YELLOW-NECKED OAKWORM defoliated several thousand acres of oak trees in Liberty, Montgomery and Harris Counties during October of 1955. A BARK BEETLE (Leperisinus sp.) was found heavily infesting ash trees in Swisher County. This is probably an undescribed species according to W. H. Anderson.

Insects Affecting Man and Animals

CATTLE GRUBS (Hypoderma spp.) were more numerous than usual in most areas. Reports from the larger packing plants over the State indicate that populations of this pest were about 15 percent heavier than normal. SCREW-WORM (Callitroga hominivorax) infestations occurred more frequently and were more general than last year. Normal infestations of horn flies, cattle lice, fleeceworms, ear ticks, mange mites, tabanids and ticks occurred on livestock. BROWN DOG TICKS (Rhipicephalus sanguineus) were unusually heavy on dogs in many areas throughout the year. HOUSE FLY (Musca domestica) continued to be a problem around livestock barns and pens. Roaches, silverfish, termites, clothes moths and fleas were the major pests in and around homes. Blood-sucking CONENOSE BUGS (Triatoma spp.) were reported from many areas attacking humans, dogs and chickens. Two cases of Chagas disease, which is carried by these insects, were reported in Texas during the past year.

SUMMARY OF INSECT CONDITIONS - 1955

NEBRASKA

Reported by L. W. Andersen, R. E. Hill, R. E. Roselle

Field Crop Insects

CORN EARWORM (Heliothis zea) infestations were light to moderate throughout southeast and south-central counties. Climatic conditions were unfavorable during the summer for development of this pest. This pest ranked ninth as a most important insect in Nebraska. CORN SAP BEETLES (Carpophilus dimidiatus) were present for only a short time in some of the injured ears. ARMY CUTWORM (Chorizagrotis auxiliaris) was first observed in Red Willow and Lincoln Counties during second week in March. Only a few important outbreaks were recorded from western Nebraska, but severe damage occurred in many alfalfa fields in eastern third of the State. Infestations varied from 1 to 16 per square foot. This pest was ranked third as a most important pest in Nebraska for 1955. General heavy infestations of PALE WESTERN CUTWORM (Agrotis orthogonia) occurred in Kimball, Banner, Garden and Cheyenne Counties. Damage became noticeable during first week in May and continued to the latter part of June. This species ranked sixth as a most important pest in Nebraska. Only local, non-economic infestations of VARIEGATED CUTWORM (Peridroma margaritosa) were reported.

A CUTWORM (Euxoa detersa) damaged corn on sandy soil in Pierce County. Population greater than in past 4 or 5 years. Replanting was necessary in some cases. BROWN WHEAT MITE (Petrobia latens) - A light, noneconomic infestation appeared first on volunteer wheat in the southeastern area during April. Isolated heavy infestations occurred in western Nebraska during June. No serious damage was reported. PEA APHID (Macrosiphum pisi) appeared in alfalfa during April and reached a peak during last of June. SWEETCLOVER WEEVIL (Sitona cylindricollis) feeding was prevalent in second-year sweetclover during late April in eastern Nebraska. Counts ranged from 3 to 20 per 25 sweeps.

The following insects occurred in light populations or caused some concern on corn in some areas: SEED-CORN MAGGOT (Hylemya cilicrura) in south central areas, SEED-CORN BEETLE (Agonoderus lecontei) in southeast counties, MAIZE BILLBUG (Calendra maidis) in bottom lands in southeastern and northeastern areas, a SOD WEBWORM (Thaumatopsis pectinifer) in sandy area of Platte County. ALFALFA PLANT BUG (Adelphocoris lineolatus) was light to moderate in most fields of alfalfa, counts from 5 to 56 per 25 sweeps. It now occurs throughout State. RAPID PLANT BUG (Adelphocoris rapidus) was light in alfalfa in most counties. TARNISHED PLANT BUG (Lygus lineolaris) was moderate to heavy, counts ranging from 6 to 483. Peak infestation was reached early in May and continued until middle of November. GRASSHOPPERS (crop species) caused light to heavy damage locally, chiefly in alfalfa, clover, pastures, and corn margins. Sixty percent defoliation occurred in some areas. The areas included the eastern third of the State and a small portion in the southwest. Predominant species were Melanoplus femur-rubrum in eastern Nebraska followed by M. mexicanus, M. differentialis, and M. bivittatus. M. mexicanus population was much higher than in recent years. Range species - A local threatening infestation in Blaine, Logan, and McPherson Counties embraced some 120,000 acres. A light infestation appeared in Deuel, Keith, Lincoln, Arthur, and Thomas Counties. The dominant species on rangeland was Ageneotettix deorum followed by Amphitornus coloradus. Egg survey in the State in general substantiated the adult survey. The southeast area, egg pods per square foot, ranged from .28 to 1.2 in the field to 3.6 in the margins. The north-central area, egg pods per square foot, ranged from 0 to 2.8. The northeast area, egg pods per square foot, ranged from .2 to 1.8 in the field to 1 in the margins.

HESSIAN FLY (Phytophaga destructor) population was very low--almost non-existent. CORN ROOT APHID (Anuraphis maidi-radicis) populations were heavy during June and July in the east, east-central, south-central, and the southeast areas. Severe damage in some areas. SOUTHERN CORN ROOTWORM (Diabrotica undecimpunctata howardi) was more abundant than in 1954; most abundant in the eastern third of State. Damage was very light due to the extensive control program against rootworms. WESTERN CORN ROOTWORM (Diabrotica virgifera) was present throughout corn growing regions. Damage was light due to extensive use of soil insecticides. NORTHERN CORN ROOTWORM (Diabrotica longicornis) populations were normal. No severe damage

was reported. CORN LEAF APHID (Rhopalosiphum maidis) was normal on field corn, but grain sorghum and milo in south-central areas were heavily infested. A very light infestation of FALL ARMYWORM (Laphygma frugiperda) occurred in southern counties. ARMYWORM (Pseudaletia unipuncta) infestations were light and spotted in the eastern area. More damage in corn than in wheat. A few adults were picked up in the fall. YELLOW-STRIPED ARMYWORM (Prodenia ornithogalli) was light to moderate in alfalfa and corn in north-central, northeast, and southeast Nebraska. Previous reports of this species were in 1947. ALFALFA CATERPILLAR (Colias philodice eurytheme) was very abundant throughout the alfalfa areas. Much more abundant than in past years. ALFALFA WEBWORM (Loxostege commixtalis) - Only light infestations were recorded from the southeastern counties. GARDEN WEBWORM (Loxostege similis) was light in central area on alfalfa, spotted but moderate to heavy infestations in southeast, with webbing, very prevalent. SIX-SPOTTED LEAFHOPPER (Macrosteles fascifrons) was moderate to heavy in wheat and other small grains in north-central and south-central counties. Controls were necessary in some cases. PAINTED LEAFHOPPER (Endria inimica) infestations were light to moderate in alfalfa and small grains but no serious damage was reported. Another LEAFHOPPER (Aceratagallia uhleri) was moderate on small grain, alfalfa and pastures. Again no serious damage was reported from this pest. BEET LEAFHOPPER (Circulifer tenellus) overwintering adults were picked up early in March on various mustards. The infestation continued throughout the summer and the curly top virus was found around Holdrege and North Platte.

LESSER CLOVER LEAF WEEVIL (Hypera nigrirostris) was moderate to heavy in red clover in eastern counties. Much damage to heads of clover. A light population of CLOVER ROOT CURCULIO (Sitona hispidula) prevailed in east-central counties on alfalfa. No serious damage. ALFALFA WEEVIL (Hypera postica) larvae caused only slight damage in the known infested counties in the west. Large numbers of CLOVER SEED CHALCID (Bruchophagus gibbus) were reported from Madison County on red clover. SPOTTED ALFALFA APHID is new to the State. It first appeared in late August in the Republican Valley. By October it had spread through the Platte and Loup Valleys and as far north as the Niobrara Valley. Populations ranged as high as 500 per sweep of a standard net. Economic damage occurred, but losses last fall were minimized by the onset of cold weather. YELLOW CLOVER APHID, closely related to the spotted alfalfa aphid, occurred on red and alsike clovers. Infestations were confined mostly to the eastern third of the State. No serious damage from this species. CHINCH BUG (Blissus leucopterus) fall survey reveals a light to very severe condition in southeastern counties. Counts ranged up to 2983 bugs per square foot. FALSE WIREWORM (Eleodes spp.) adults were abundant in most wheat fields in southwestern, central, and southeastern Nebraska. WIRE-WORMS (Melanotus spp.) caused spotted but moderate to severe damage in several areas of the central corn-growing region. WHEAT CURL MITE (Aceria tulipae) occurred only in occasional fields. Infestations scattered in the east, central, and the panhandle.

There was estimated five percent WHEAT STEM MAGGOT (Meromyza americana) infestation in scattered wheat fields in and about Hayes County. ENGLISH GRAIN APHID (Macrosiphum granarium) was light to moderate in wheat and oats in eastern and south-central Nebraska. WHEAT HEAD ARMYWORM (Faronta diffusa) - Last reported damage by this insect was in 1936. Moderate to heavy populations reported in south-central, southwestern, and southeast Nebraska. The infestation continued up to harvest. This form ranked tenth as a most important crop insect in Nebraska. EUROPEAN CORN BORER (Pyrausta nubilalis)- Spring surveys revealed a good winter survival that presented a threat to the corn during 1955. Populations in the northeast were 22,667 borers per acre; central area 16,482; southeast 4,840; and the south-central only 871 borers per acre. By June 9 emergence was well underway. Egg deposition reached a peak, 400 to 500 per 100 plants in Cedar County by June 24. Second-generation adults appeared July 21 intermingled with first-generation larvae. This resulted in a prolonged egg laying period. Drought conditions of 1955 were not very favorable for egg and young larval survival. Drought also caused a 50 percent or more loss in corn yields. Second-generation larvae were down from the previous year. Fall survey showed an average of 225 borers per 100 stalks in the northeast; 148 in the east-central area; 99 in the southeast; and 18 borers in the central area. The State average was 170 borers per 100 stalks. Total estimated loss in the counties surveyed (50) was \$8,551,144.

Vegetable and Truck Crop Insects

CORN SAP BEETLE (Carpophilus dimidiatus) was present in injured ears and stalks of sweet corn in eastern and central Nebraska in late July-early August. POTATO SCAB GNAT (Phyxia scabies) caused some slight damage to potatoes in Keith County. Considerably less serious than in 1954 when it was first reported as injurious in the State. During mid-July a very high population of TUBER FLEA BEETLE (Epitrix tuberis) occurred in some early potato fields in western Nebraska but damage was light due to extensive use of soil insecticides. POTATO LEAFHOPPER (Empoasca fabae) - First 1955 report for State was May 18. Some "hopperburn" was reported in the east and central Platte Valleys. More abundant than in recent years in western Nebraska. This species ranks seventh as a most important insect in Nebraska. COLORADO POTATO BEETLE (Leptinotarsa decemlineata) in western Nebraska was fairly normal; slight injury in some fields. POTATO PSYLLID (Paratrioza cockerelli) appeared at first in small numbers in late April. During May there was a sharp increase on potato cull piles and on Lycium in the Platte Valley. There was continued increase through July in early potato fields and psyllid yellow symptoms appeared. Late fields were moderate to heavily infested. MEXICAN BEAN BEETLE (Epilachna varivestis) was observed in sufficient numbers to cause moderate injury in several fields in Scotts Bluff and Sioux Counties. Population was up from last year. HARLEQUIN BUG (Murgantia histrionica) was moderate on cole crops in southeastern Nebraska. MELON APHID (Aphis gossypii) was very abundant on cucurbits in southeastern area.

A STRIPED BLISTER BEETLE (Epicauta sp.) was common on alfalfa and garden tomatoes and potatoes from July through the latter part of August. BEAN LEAF BEETLE (Cerotoma trifurcata) damaged soybeans in Thayer, Burt, and Hall Counties. Light infestation reported.

Insects of Shade Trees, Perennials, and Other Ornamentals

Heavy infestations of EUROPEAN ELM SCALE (Gossyparia spuria) occurred in western Nebraska. ELM TREE BORER (Saperda tridentata) was general in many areas of eastern and western Nebraska. A few parasites (Atanycolus ulmicola) appeared for the first time May 27. In some areas of Lincoln three-fourths of the elm trees are infested to the point where reinfestation would kill the trees. CLOVER MITE (Bryobia praetiosa) migrations into homes were generally heavy throughout State. OYSTERSHELL SCALE (Lepidosaphes ulmi) was very abundant on lilac in eastern Nebraska. BAGWORM (Thyridopteryx ephemeraeformis) caused severe damage to coniferous trees in southeastern Nebraska. SOUTHERN MASKED CHAFER (Cyclocephala immaculata) infestations in lawns were light to moderate in the eastern third of State. Adults were appearing at lights from mid-April to July. SMALLER EUROPEAN ELM BARK BEETLE (Scolytus multistriatus) - Light infestations were found in several areas in southeastern Nebraska. No Dutch elm disease reported in the State yet. NANTUCKET PINE MOTH (Rhyacionia frustrana) was very abundant on ponderosa pine along the Pine Ridge area. PINE NEEDLE SCALE (Phenacaspis pinifoliae) was moderate to heavy on ponderosa pine in the Pine Ridge area. GREEN-STRIPED MAPLEWORM (Anisota rubicunda) caused defoliation in Omaha and Auburn area on shade trees in the cities and nurseries. COTTONWOOD LEAF BEETLE (Chrysomela scripta) feeding was heavy on yellow cottonwood in nursery plantings. Both larvae and adults involved. WHITE-MARKED TUSSOCK MOTH (Hemerocampa leucostigma) caused heavy damage on pin oak nursery seedings. SPIDER MITES (Tetranychus spp.) were moderate to heavy on juniper and spruce trees in central and eastern areas. COTTONY MAPLE SCALE (Pulvinaria innumerabilis) was light in scattered eastern areas.

Insects Affecting Man and Animal

CATTLE GRUBS (Hypoderma spp.) - Fly activity began early in April and developed into a normal situation. HORN FLY (Siphona irritans) infestation began in early May and spread throughout State. Numbers increased in all areas. Eighty flies per head of cattle reported in Richardson County. There was a rapid increase of STABLE FLY (Stomoxys calcitrans) during the summer. Considerable annoyance to cattle in most areas. HOUSE FLY (Musca domestica) population was up from 1954. Development was slow due to the hot dry weather, but with some moisture in late summer, large numbers caused considerable annoyance to cattle and humans. CATTLE LICE (Bovicola bovis and Hematopinus spp.) situation was normal. SCREW-WORM (Callitroga hominivorax) was reported from Thayer County, August 1. AN EAR TICK (Otobius megnini) infestation was found in ears of 93 percent of a herd consisting of 500 cattle in Dundy County. Last report of this pest was in 1937.

ROCKY MOUNTAIN WOOD TICK (Dermacentor andersoni) seems to be increasing in Sioux, Dawes, and Scotts Bluff Counties. AMERICAN DOG TICK (D. variabilis) is increasing in the wooded river valleys throughout the State. Largest population in Dawes County. MOSQUITOES - Large populations of Aedes dorsalis and Culex tarsalis in the irrigated areas of western Nebraska, especially the North Platte Valley.

Cooperators: The following Nebraska entomologists also contributed to the Cooperative Economic Insect Survey during 1955: H. J. Ball, O. S. Bare, E. W. Hamilton, L. W. Quate, R. Staples, R. L. Wallis, C. Walstrom and W. Rapp.

HIGHLIGHTS OF INSECT OCCURRENCES IN CANADA, 1955

Reported by C. G. MacNay
Canada Department of Agriculture

(As this summary contains information on many of the same species of insect pests that entomologists in the United States have to deal with, it is believed that it will be of considerable interest to readers of the Cooperative Economic Insect Report. Dr. MacNay has kindly consented to its inclusion in the Report.)

In general, insect damage in Canada in 1955 was moderate. The most alarming outbreak of the season was that of aphids on grain; these caused extensive damage, mainly to late barley, in all of the major grain-growing areas of the country. The following are a few of the highlights: A widespread and severe outbreak of aphids occurred on grain in all provinces from Alberta to Prince Edward Island. The CORN LEAF APHID (Rhopalosiphum maidis) was the principal species, especially in the Prairie Provinces. The ENGLISH GRAIN APHID (Macrosiphum granarium) was of secondary importance and GREENBUG (Toxoptera graminum) a minor pest. A fourth species, Rhopalosiphum pseudoavenae was numerous in New Brunswick. Major losses occurred in late barley, many stands being abandoned. In the Prairie Provinces well over two million acres were seriously affected, the situation being aggravated by the fact that much of the land ordinarily seeded to wheat was seeded to barley. Of several cutworm species that are important annually, the ARMY CUTWORM (Chorizagrotis auxiliaris) was outstanding. During May and June it caused extensive damage in Alberta for the first time in 12 years and in Saskatchewan for the first time on record. In southern Alberta, several thousand acres of mustard and flax were destroyed and alfalfa, barley, and garden crops were severely damaged. In southern Saskatchewan, some 20,000 acres of wheat and barley were damaged, 10,000 acres of wheat being destroyed. No previous occurrence in the Province had caused damage of such magnitude. The BERTHA ARMYWORM (Mamestra configurata) occurred on rape and flax in

north-central and northeastern agricultural areas of Saskatchewan in the heaviest infestation since 1948. On the other hand, PALE WESTERN CUTWORM (Agrotis orthogonia) occurred in the lightest infestation in many years. In southwestern Ontario, infestation of vegetable crops by cutworms of various species was about as severe as any on record. Tobacco and sugar beets also were extensively damaged. The ARMYWORM (Pseudaletia unipuncta), which occurred in outbreak numbers in Eastern Canada in 1954, appeared only in scattered, local infestations; general outbreaks have not occurred in two successive years in Canada. In several districts of the Red River Valley, Manitoba, wheat was infested by the WHEAT MIDGE (Sitodiplosis mosellana). The insect, seldom reported in appreciable numbers in Canada, was first recorded in Manitoba in 1954. A survey of adult GRASSHOPPERS in this province revealed a serious, general build-up, especially in the central portion of the agricultural area. Some vegetable insects were also prominent. Over 4,000 acres of sugar beets in southern Alberta were sprayed to control flea beetles, probably Psylliodes punctulata, and a CARRION BEETLE (Silpha bituberosa); control measures are rarely necessary on such a scale for these insects. North of Taber and Cranford, Alberta, infestation of sugar beets by the BEET WEBWORM (Loxostege sticticalis) was the most severe since 1941. In British Columbia the BROWN WHEAT MITE (Petrobia latens), a new pest on onions, caused considerable damage in the Kelowna area. In southern Ontario, the CABBAGE LOOPER (Trichoplusia ni) appeared generally in the most severe outbreak in at least nine years; in southwestern districts, infestation of PEA WEEVIL (Bruchus pisorum) on canning peas was the most severe on record; and in Kent County, Ontario, infestations of POTATO APHID (Macrosiphum solanifolii) on tomatoes were the most widespread in the memory of growers.

Among the fruit insects, an outbreak of TWO-SPOTTED SPIDER MITE (Tetranychus telarius) occurred for the first time in southwestern Quebec in several commercial apple orchards; and for the first time in Norfolk County, Ontario; the CLOVER MITE (Bryobia praetiosa) caused severe, local damage to the foliage of apple. Another first occurrence involved the Niagara, Ontario, area, where the WHITE PEACH SCALE (Pseudaulacaspis pentagona) was collected on weeping mulberry near Beamsville. In British Columbia, the ORANGE TORTRIX (Argyrotaenia citrana) first observed feeding on holly berries in the fall of 1954, survived the winter and is causing concern among holly growers. Notable among the insects that attack livestock and man, the ROCKY MOUNTAIN WOOD TICK (Dermacentor andersoni), apparently increasing in central British Columbia, heavily infested 400 cattle on one ranch; 30 were paralyzed and two died. An infestation, apparently of TROPICAL RAT MITE (Bdellonyssus bacoti), in a 17-family tenement at Trenton, Ontario, indicates the first establishment of the species in Canada. Eight specimens of the tick Ixodes cookei were removed from a man at Marysville, Ontario, who had visited a doctor seeking a remedy for a sick stomach. In the household, the BROWN-BANDED ROACH (Supella supellectilium) occurred in an apartment in Saskatoon, Saskatchewan, and in a dwelling in Ottawa, Ontario. Both are first records for these provinces.

In July, A STINK BEETLE (Nomius pygmaeus), invaded residences in Matachewan, Ontario, in such numbers that the occupants were unable to sleep because of the odor; the insect has been described as the most intensely malodorous creature for its size in the world. Adult flights are frequently associated with forest fires, which may have accounted for the annual occurrence. Apparently they are driven out of forest areas, their natural habitat, by the smoke. In Ontario and Quebec, reports of the invasion of dwellings by immense numbers of the STRAWBERRY ROOT WEEVIL (Brachyrhinus ovatus) were unusually numerous. Among stored product insects, a survey of terminal elevators in ports on the upper Great Lakes, and of loaded boats and barges revealed a general infestation of Ephestia sp., probably elutella and the INDIAN-MEAL MOTH (Plodia interpunctella).

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